

Midwest Ag-Focus Climate Outlook

Main Points

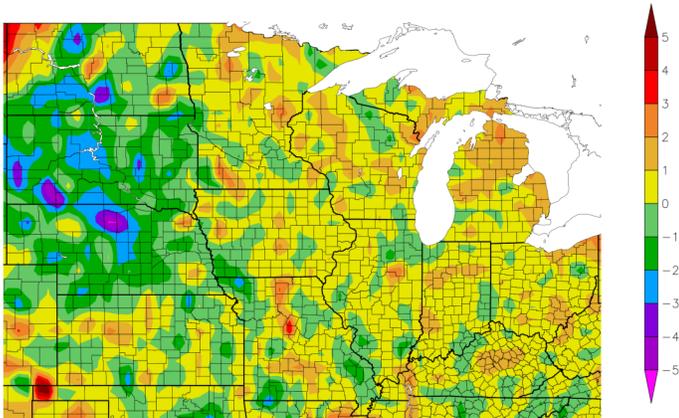


- ◆ Quite the change in precipitation and temperature in October, with multiple occurrences of precipitation for the region and a sharp turn from above to below normal temperatures the last week of October.
- ◆ Drought and soil moisture conditions have improved over the past month in places, but elimination of soil moisture deficits will take time.
- ◆ While corn and soybean are safe from the October cold snap, there is concern for the impact on winter wheat, specialty crops, perennials, and livestock.
- ◆ For a majority of the Midwest, November's outlook suggests there is an equal chance of above, below, or near normal for both temperature and precipitation, with the exception of the eastern Midwest potentially seeing below normal precipitation.



Current Conditions

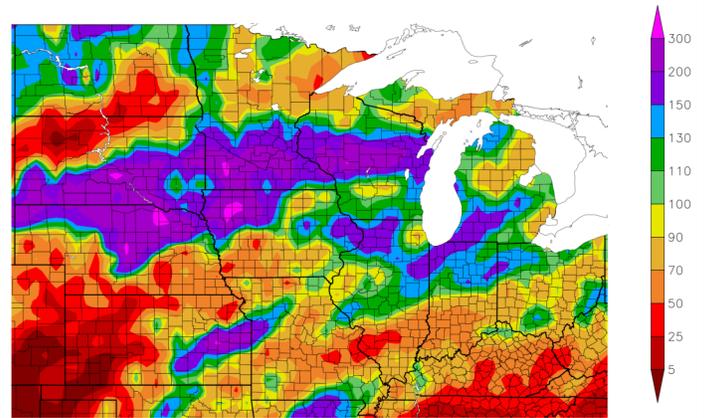
Departure from Normal Temperature (F)
10/4/2023 – 11/2/2023



Generated 11/3/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

Percent of Normal Precipitation (%)
10/4/2023 – 11/2/2023



Generated 11/3/2023 at HPRCC using provisional data.

NOAA Regional Climate Centers

A number of systems swept across the region over the past month, bringing much-needed precipitation. Most notably, rounds of precipitation fell the week of October 23, with snowy conditions for the Dakotas and rainy with a few flurries for the Midwest. The southern and eastern states didn't see as much precipitation the last week of October because of the high pressure sitting over the southeastern US, preventing any precipitation coming into those areas. Compared to past months, much smaller areas of the region saw less than 50% of normal, while much larger areas of the region saw greater than 100% of normal precipitation. In particular, a widespread band from the Great Plains through Wisconsin and smaller areas in the region even saw 150%+ of normal. Above normal temperatures held on for much of the region for nearly the entire month of October, until significantly colder air consumed much of the north-central U.S. by the end the month. Averaging over the last 30 days, temperatures were mostly 1-3°F above normal for the Midwest and 1-2°F below normal for the Plains. With the cold blast, the temperature deviations over the last 7 days of the month ranged from 0-5°F below normal for Illinois and Wisconsin to as much as 20-25°F below normal for the Dakotas.

Images from High Plains Regional Climate Center (HPRCC), Online Data Services: [ACIS Climate Maps](https://www.climatehubs.usda.gov/hubs/midwest). Generated: 11/3/2023.



Impacts

Drought

Drought conditions improved slowly, but significantly over the last month with 1-3 class improvements. Groundwater and streamflow have been slow to respond due to significant deficits and conditions remain very dry for much of the region and, thus, will take continued precipitation to see further improvements in terms of soil moisture and drought recovery.

Crops and Livestock

Rapid maturity in September allowed for a significant amount of corn and soybean harvest in the month of October. Even though there was precipitation, the soils were so dry that they soaked up the rain and did not cause significant harvest delays. Pasture and range conditions have been a mix of improved and worsened throughout the month. October precipitation likely helped with cover crop establishment and winter wheat seeding and emergence. However, there may be concerns about the impacts of the cold blast on winter wheat if there was not enough time for the crop to reach an optimal growth stage before going dormant, along with concerns for specialty crops and perennials. Additionally, as you may be making decisions on fall nutrient applications, monitor soil temperature. The cool-down likely aided in bringing soils down to recommended temperatures; however, ensure soils remain below the threshold temperature before application.

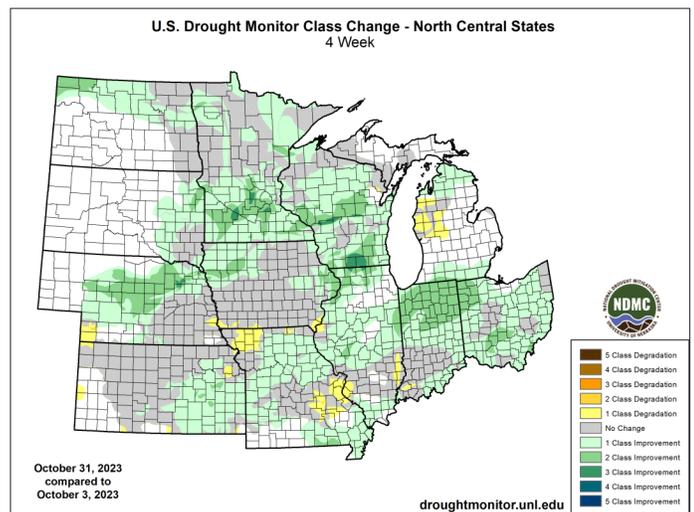
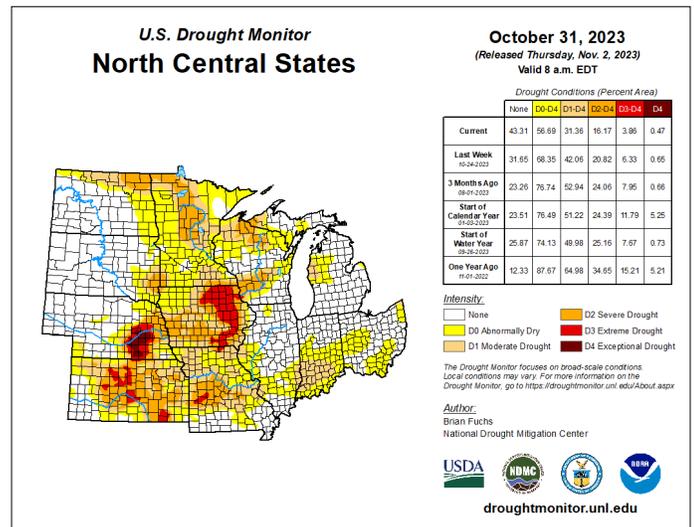
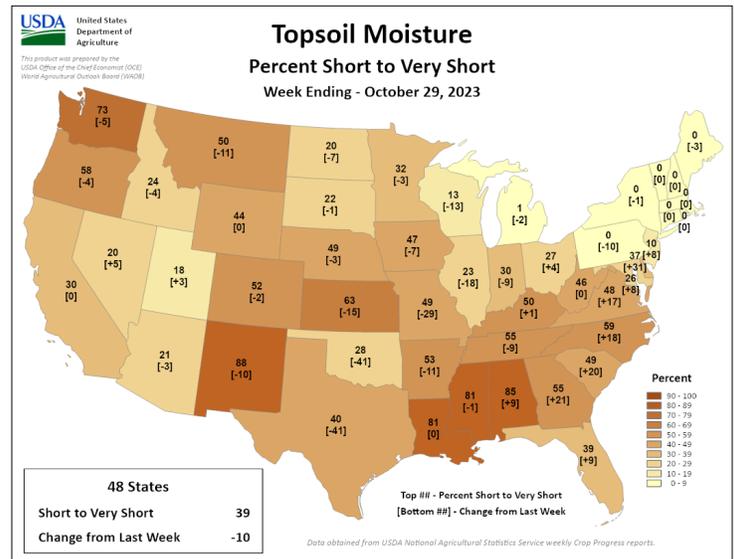
Another concern brought about by the sharp turn to colder weather is the impact on livestock. Livestock tend to react poorly to drastic changes in temperature as rapid change from warm to cold can cause illness, such as pneumonia, so keep an eye on potential signs.

Fire

With the help of the October's precipitation, the significant risk for fire has decreased, but is not eliminated entirely. The potential for ignition still largely exists - soils and crops are still relatively dry, harvest activities are still in swing, the hunting season has begun, and leaves are on the ground. Plus, if it is a hot, dry, windy day, the fire risk increases.

Mississippi River

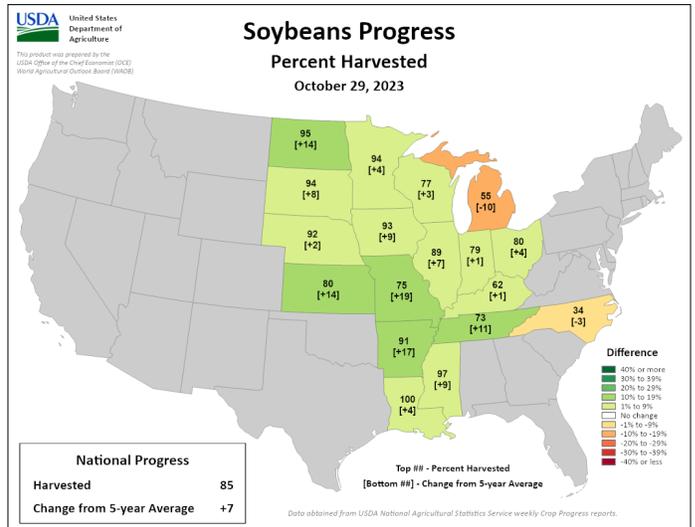
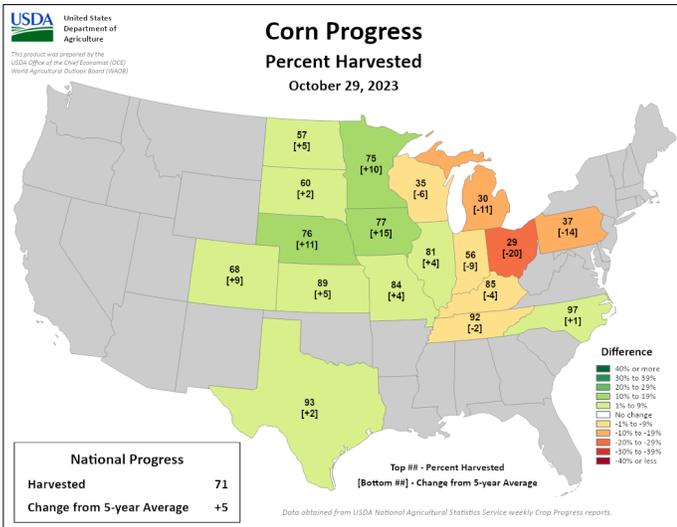
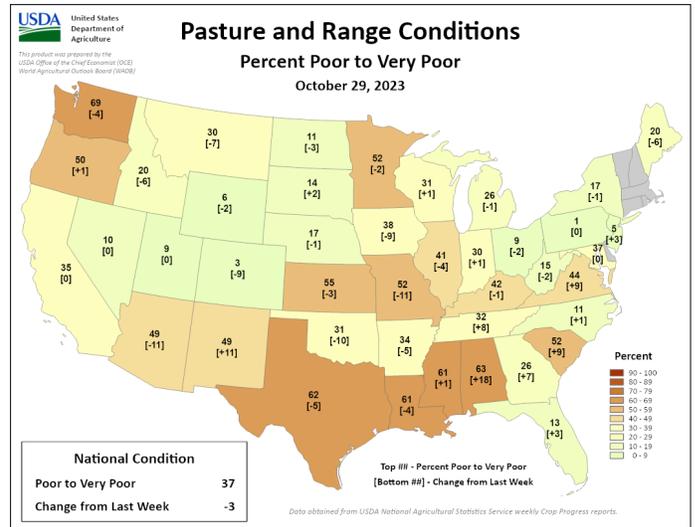
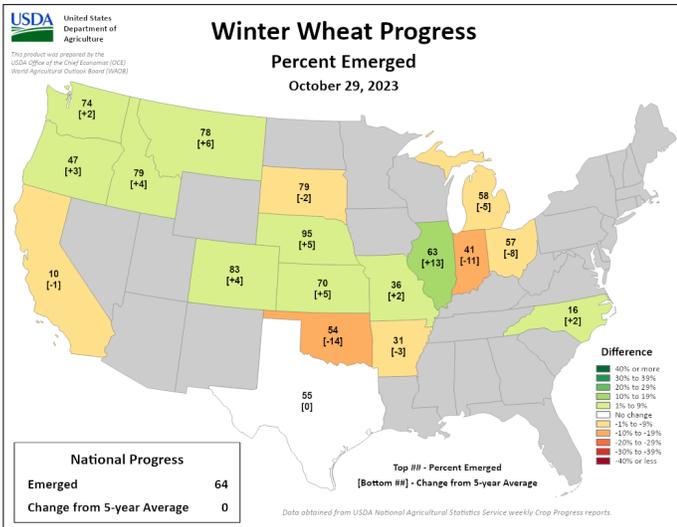
With the precipitation over the Upper Mississippi River and the Ohio River Valley throughout the month, the lower Mississippi River has seen an increase in levels toward the end of October. Nonetheless, low water is still an issue in the central Mississippi.



Maps Generated by the United States Department of Agriculture, National Drought Mitigation Center and the Short-term Prediction Research and Transition Center.



For more information, please visit:
<https://www.climatehubs.usda.gov/hubs/midwest>

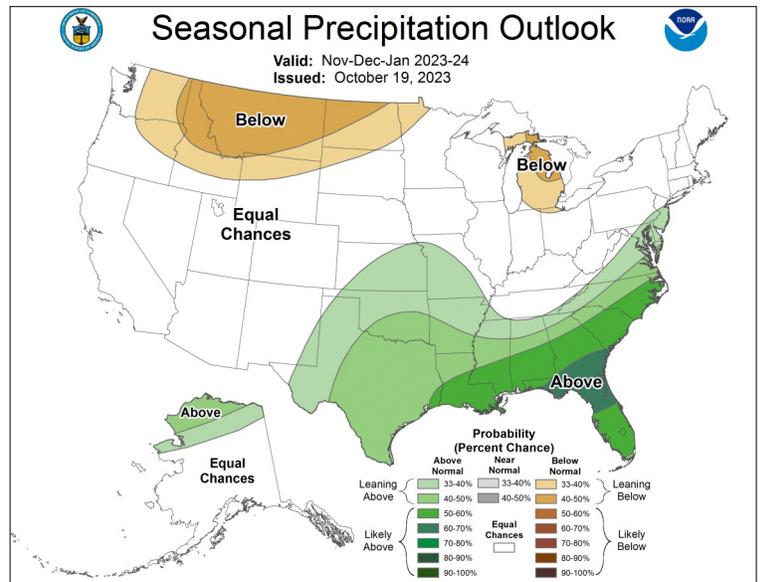
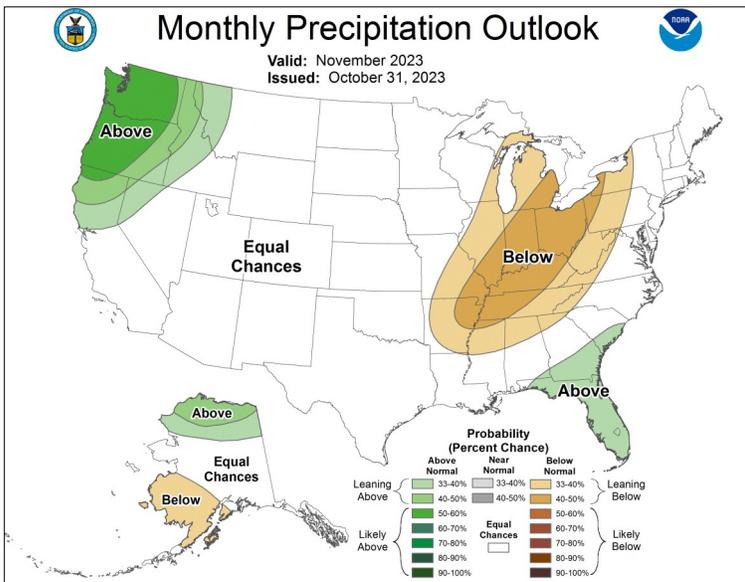
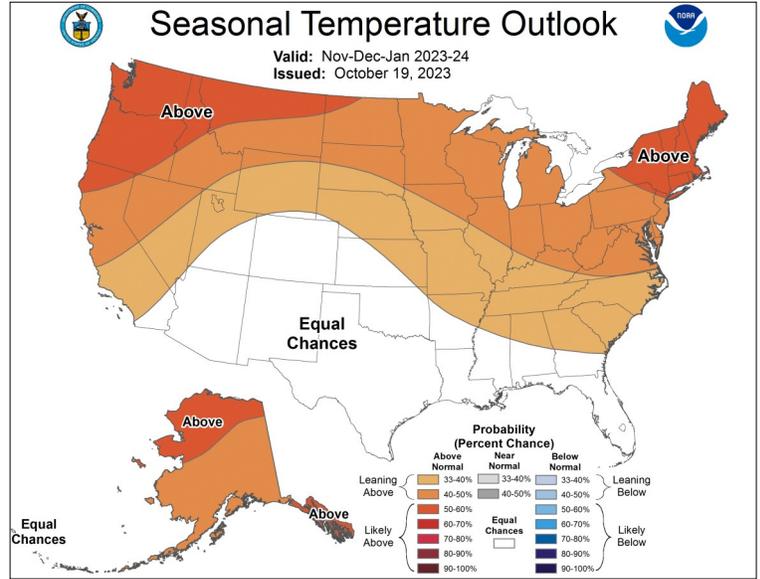
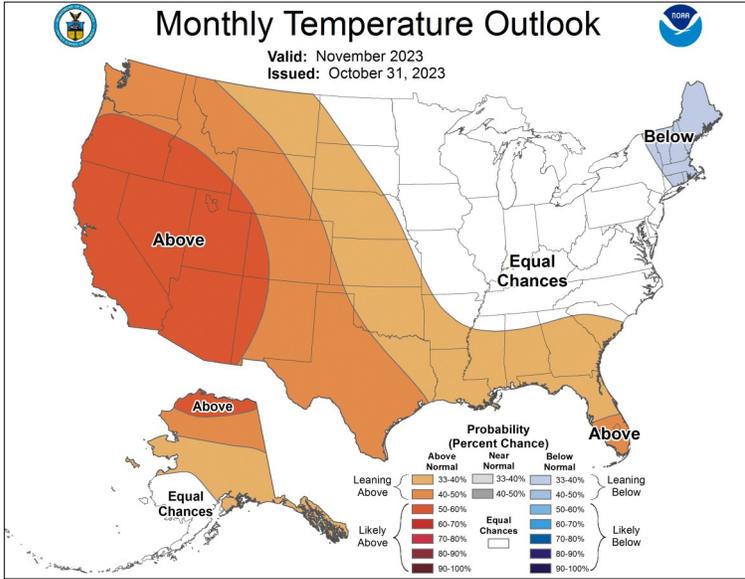


Maps generated by the United States Department of Agriculture and are now available on a National Drought Mitigation Center [webpage](#).

Outlook

The 8-14 day outlook indicates that precipitation may be below normal for the northern portion of the region- the Dakotas, western Nebraska, and northern Minnesota, Wisconsin, Michigan- and above normal for the southern portion of the region- Kansas, Missouri, southern Iowa, Illinois, Indiana, and southeastern Nebraska and Ohio. A sliver of Nebraska, southern Minnesota, northern Iowa and Illinois, and much of Wisconsin, Michigan, Indiana, and Ohio have chances for near normal precipitation. Conditions will likely be warmer for most of the region over the next 8-14 days, except for near normal in eastern Ohio. Throughout November for much of the Midwest, there is an equal chance that temperature will be above, below, or near normal, with the potential that the Great Plains may experience above normal temperatures. The Great Plains and western Midwest show equal chances for precipitation, but the eastern Midwest states may experience below normal precipitation. The seasonal outlook shows temperatures may lean above normal with equal chances for precipitation. This pattern continues to echo the effects of El Niño, where the Midwest and Great Plains are typically drier and temperatures milder. However, that does not mean that subseasonal or smaller-scale events won't bring colder temperatures or precipitation in the next 30 or 90 days.

Any remaining harvest activities should be good-to-go the first week of November with minimal precipitation in the forecast. As temperatures may continue to fluctuate as we transition from fall to winter, the monitoring of crop and livestock health and of soil temperatures should be continued.



Outlooks provided by the [Climate Prediction Center](https://www.cpc.ncep.noaa.gov/).

Partners and Contributors



- [United States Department of Agriculture \(USDA\)](https://www.usda.gov/)
- [National Oceanic and Atmospheric Administration \(NOAA\)](https://www.noaa.gov/)
- [Climate Prediction Center \(CPC\)](https://www.cpc.ncep.noaa.gov/)
- [National Weather Service \(NWS\)](https://www.weather.gov/)
- [National Center for Environmental Information \(NCEI\)](https://www.ncei.noaa.gov/)

- [National Drought Mitigation Center \(NDMC\)](https://www.ndmc.gov/)
- [National Integrated Drought Information System \(NIDIS\)](https://www.nidis.gov/)
- [Midwestern Regional Climate Center \(MRCC\)](https://www.mrcc.org/)
- [Midwest State Climatologists](https://www.msc climatologists.org/)
- [High Plains Regional Climate Center \(HPRCC\)](https://www.hprcc.org/)



For More Information

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For more information, please visit:
<https://www.climatehubs.usda.gov/hubs/midwest>